

PLANTAE MEXICANAE V

BY

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DESMONCUS CHINANTLENSIS AND ITS UTILIZATION IN NATIVE BASKETRY

THE DISCOVERY of the use of *Desmoncus chinantlensis* Liebmann ex Martius in the manufacture of baskets among the Chinantec Indians of Oaxaca has prompted me to make a study of the literature for comparative information from other regions.

Although considerable interest in basketry and weaving has been manifest in recent anthropological researches, I have been unable to find in anthropological literature any references to the use of this palm in weaving. There are, however, several scattered and incidental references to this use in technical taxonomic papers.

In view of the importance of *Desmoncus* as an excellent material in basket-making and because of the lack of easily available information regarding its use, it has seemed advisable to present the following notes on the plant and its utilization.

I. BOTANICAL CONSIDERATIONS

Desmoncus chinantlensis Liebmann in Overs. Dansk. Vid. Selsk. Forh. 1845 (1846) 8, *nomen nudum*—Liebmann ex Martius Hist. Nat. Palm. 3 (1850) 321.

Atitara chinantlensis (Liebmann) O. Kuntze Rev. Gen. Pl. 2 (1891) 727.

MEXICO: Oaxaca, District of Choapam, San Juan Lacova, long. $95^{\circ} 55'$, lat. $17^{\circ} 29'$, June 1842, *Liebmann 6594* (COTYPE); same locality and date, *Liebmann 6595* (TYPE); same locality and date, *Liebmann 6596* (COTYPE).

Chinantec name: *huan-ka*.

Spanish names : *ballí*; *bejuco de canastos*; *junco*; *junco de jaguay*; *metambilla*.

Zapotec name: *ba-ga-a*.

Desmoncus chinantlensis is a tall, stout-stemmed, subscandent shrub which is characteristically armed on the sheathing petioles with large, strong spines. The leaf blades are pinnate; the pinnae, elongate-elliptic.

The only representative of the genus in Mexico, *Desmoncus chinantlensis* is a very localized endemic, occurring in the District of Choapam (the so-called "Chinantla") of northeastern Oaxaca (where Liebmann collected the type material in 1842) and possibly in the adjacent portion of Vera Cruz. One sterile collection (*H. Ross 1122*) from the isthmus region of Vera Cruz has been referred to *D. chinantlensis* by Burret (*Fedde Repert.* 36 (1934) 201). Standley (*Contrib. U.S. Nat. Herb.* 23 (1920) 84) has stated that plants of this genus are said to occur in Tabasco; while *Desmoncus* is to be expected in Tabasco, I have not been able to find any collection of it from that state.

Desmoncus chinantlensis is very abundant in the rainforests on the Atlantic slopes of the mountains of the District of Choapam. It is one of the most conspicuous of the several genera of low palms (*Bactris*, *Chamaedorea*, *Eleutheropetalum*, *Geonoma*, *Hexapetion*, *Reinhardtia*, etc.) which are well developed in the forests of this region.

In 1933, Bailey (*Gentes Herb.* 3 (1933) 89-92) concluded that a collection of *Desmoncus* from Barro Colorado Island, Panama, which had been identified as *D. polyacanthos* Martius, was "probably *D. chinantlensis*." He pointed out that the Panamanian material matched the type collection of *D. chinantlensis* very closely. Stating that no illustration of *Desmoncus chinantlensis* was

available, he published a drawing of the leaf of the specimen from Panama (fig. 71, on p. 91).

If Bailey's tentative identification be correct, it is evident that *Desmoncus chinantlensis* represents not an endemic, but rather a very wide-ranging and variable species. At the present time, however, most authorities are of the opinion that *Desmoncus* is made up of a number of very localized endemic species. In this respect, *Desmoncus* appears to agree with several of the related genera of palms which are noteworthy because of the large number of endemic species which they contain. The genus *Desmoncus* contains about fifty known species at the present time.

In this connection, Bartlett wrote in his *Certain Desmonci (Palmae) of Central America and Mexico* (Journ. Wash. Acad. Sci. 25 (1935) 81-82): "It appears that the species of *Desmoncus* are in reality rather local in distribution. . . . Either there are many local species with rather slight distinctions, as the writer believes, or else there is a very wide-spread species, *Desmoncus chinantlensis* Liebm., made up of a group of varieties, or (as some botanists might even conclude) of taxonomically negligible variations." Bartlett was of the opinion that Bailey's Panamanian material did not represent *D. chinantlensis*.

In identifying his Panamanian material of *Desmoncus*, Bailey (l.c.) discovered that there were apparent discrepancies between the type of *D. chinantlensis* (*Liebmann 6595*) at Copenhagen and the two collections (*Liebmann 6594* and *6596*) in the United States National Herbarium. Inasmuch as difficulty has been experienced in identifying specimens of *Desmoncus* because of the uncertainty which these discrepancies have caused, Bartlett (l.c.) designated the two Liebmann collections in the United States National Herbarium as cotypes.

Fortunately, an excellent set of drawings of *Desmoncus chinantlensis* is now available for systematic study. Liebmann skilfully executed a number of drawings of his Mexican palms. These have never been published and, until recently, have been unavailable to most investigators. Through the courtesy of the Field Museum of Natural History, photographic copies of a number of the drawings from Liebmann's *Icones Ined.* have been distributed to several herbaria. The excellence and completeness of the figures of *D. chinantlensis* should remove every difficulty which may arise in the future as a result of ambiguity in the interpretation of the original description or of discrepancies between the three original collections.

II. UTILIZATION

The manufacture of baskets, trays, hampers and other containers of excellent quality is an important industry among the forest-dwelling Chinantec Indians of the "Chinantla." The principal seats of this craft are the mountain villages of San Juan Lacova (long. $95^{\circ} 55'$, lat. $17^{\circ} 29'$), San Juan Petlapa (long. $96^{\circ} 03'$, lat. $17^{\circ} 29'$), San Juan Teotalcingo (long. $95^{\circ} 58'$, lat. $17^{\circ} 58'$), and San Juan Toabela (long. $96^{\circ} 04'$, lat. $17^{\circ} 32'$). In these remote villages, most of the men are skilled in basket-making.

This industry is ancient and is said to be much less extensive among the Chinantecs now than it was formerly. According to Bevan (*The Chinantec: Report on the central and south-eastern Chinantec region. Vol. 1—The Chinantec and their habitat*, Inst. Panam. Geogr. Hist., Publ. 24 (1938) 45), the name of the very ancient Chinantec village of San Juan Lacova is a Zapotec word meaning "place of baskets" or "place of vines."

Most of the baskets, trays and hampers are used local-

ly in the Chinantec villages. The surplus is taken to the Zapotec town of Santiago Choapam (long. $95^{\circ} 54'$, lat. $17^{\circ} 22'$) and is there sold to Zapotec tradesmen for very small sums. The Zapotecs take the baskets to nearby villages and sell them at much higher prices. Apparently none of the excellent Chinantec basketry reaches the markets of Oaxaca City. The baskets which are sold in the capital are made by the Mixtecs of western Oaxaca and are constructed of entirely different plant materials.

The basic plant in this forest Chinantec industry is *Desmoncus chinantlensis*. The men gather the flexuous stems of the palm, remove the sheathing spiny petioles and bark, and use the lustrous white stems without further treatment. One of the Chinantec names of the plant, *huan-ka*, means, according to the natives, "basket (*ka*) vine (*huan*)."

While most of the baskets are made from *Desmoncus chinantlensis*, other plants may enter into their construction. The fibrous aerial roots of epiphytic species of *Anthurium* and *Philodendron*, which are very abundant in the forests of the District of Choapam, are also utilized. Usually only portions of the baskets, especially the covers, are made from the *Anthurium* and *Philodendron* roots, while the main part is constructed of *Desmoncus* stems. Sometimes, however, baskets are made entirely of *Anthurium* or *Philodendron* roots, but these baskets are not so strong and durable as those which are entirely or partly made of *Desmoncus* stems.

According to Bevan (l.c., p. 45), the Chinantec baskets are constructed from the "vine from which are made the splendid hammock-bridges so characteristic of the Chinantec." Many different lianas enter into the construction of the long and beautiful suspension-bridges which are so numerous in northeastern Oaxaca. The most common materials which are used for this purpose I

found to be the stems of some species of *Cissus*, *Entada* and *Vitis* and the elastic aerial roots of some species of *Ficus*. These four plants are not used in Chinantec basketry.

In the Collection of Economic Plants of the Botanical Museum of Harvard University, there are three Chinantec baskets which were collected in San Juan Teotalcingo in June 1939. Two of these are constructed of *Desmoncus chinantlensis* and are exceedingly strong; the third is made almost entirely of the aerial roots of *Philodendron sagittifolium* Liebmann, but with a framework of *Desmoncus chinantlensis*.

In British Honduras, according to Bartlett (l.c., p. 82), the following species of *Desmoncus* (very closely allied to *D. chinantlensis*) are used in making baskets: *D. anomalus* Bartlett, *D. ferox* Bartlett, *D. Lundellii* Bartlett, *D. quasillanus* Bartlett and *D. uxactunensis* Bartlett. In this connection, he writes: "These related plants of northern Central America are called 'basket tie-tie' or 'basket-whist' by the inhabitants of British Honduras, and 'bayal' by the Spanish-speaking people and the Maya. In British Honduras, any vine is a 'tie-tie' and the *Desmonci* are the particular 'tie-ties' of which baskets are made, whence the name." Similarly, Pittier (*Plantas usuales de Costa Rica* (1908) 114) stated that *matamba* (*D. costaricensis* (Kuntze) Burret)¹ is used in the manufacture of baskets in Nicoya.

In South America, *Desmoncus horridus* Splitgerber ex Martius is used in basketry in Venezuela (Pittier: *Manual de las plantas usuales de Venezuela* (1926) 100-101).

¹Pittier reported *matamba* as *Desmoncus oxyacanthos* Martius, but, according to Standley (Field Mus. Nat. Hist. Bot. Ser. 18 (1937) 117), this plant is *D. costaricensis*, an endemic of Costa Rica. Standley likewise notes the use of this plant in basket-making in Nicoya.

Pittier quotes Ernst as saying that the stems of this plant are the best and most durable of all cordage materials. In his list of fibre plants of the World (U.S. Dept. Agric. Fiber Invest. Rept. 9 (1899) 149), Dodge makes no mention of the use of *Desmoncus* in basketry, but he reports that the Brazilian *D. macroacanthos* Martius is the source of a useful fiber.